U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Valley Pike VOC Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: **POLREP #4**
Progress
Valley Pike VOC Site

Riverside, OH
Latitude: 39.7975660 Longitude: -84.1320980

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From: Steven Renninger, On-Scene Coordinator
Date: 7/23/2014
Reporting Period: May 16 through July 18, 2014

1. Introduction

1.1 Background

Site Number:	C5U2	**Contract Number:**	EP-S5-08-02
D.O. Number:	30281.0134	**Action Memo Date:**	10/29/2013
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	12/9/2013	**Start Date:**	12/9/2013
Demob Date:		**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	OEPA
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

Time-Critical Removal Action

1.1.2 Site Description

Ohio EPA Site Inspection - November 2010

In November 2010, Ohio EPA conducted a Site Inspection at Mullins Rubber Products (MRP) facility on Valley Pike in Riverside, Ohio, and noted the flow of groundwater is to the south and southwest of the potential source area for PCE and TCE groundwater contamination. Six groundwater samples were collected using the Geoprobe® direct-push technology. The active deep production well was sampled, along with dry well number DW-2, which received cooling water from the MRP degreasing tanks. Ohio EPA documented PCE and TCE contamination in the active production well and dry wells at the source area in the November 2010 sampling.

Ohio EPA Expanded Site Inspection - December 2011

In December 2011, Ohio EPA conducted an Expanded Site Inspection (ESI) at the source area. Three Geoprobe monitoring wells were installed. ESI samples documented PCE and TCE in both shallow and deep aquifers but contamination was highest in MW-3 located at the southwest corner of the source area. PCE was detected at a concentration of 300µg/L in MW-3. Higher concentrations of PCE in the shallow aquifer pointed to a shallow rather than a deep source of PCE.

Ohio EPA Supplemental Expanded Site Inspection - March 2013

In March 2013, Ohio EPA conducted a Supplemental Expanded Site Inspection (SESI) at the Site. SESI sampling results showed significant detections of TCE and PCE in

the shallow sand and gravel aquifer. The highest concentration of PCE in shallow groundwater was detected at MW-14 (soil boring SB-14 location), approximately 50 feet (ft) down-gradient of the source facility. In addition, Ohio EPA observed PCE concentrations ranging from 5 to 14,000 µg/L along the southwestern perimeter of the source area and non-detect to 31 µg/L along the northeastern perimeter (upgradient) of the source area.

Additionally, PCE was detected at a concentration of 1,500 µg/L at MW-4 in a residential area (corner of Bushnell and Hypathia Avenues) located 900 ft southwest of the source area. The detection of VOCs in the groundwater underlying this residential area, which is down-gradient of the source area, prompted Ohio EPA to request EPA removal assistance in May 2013 to investigate potential vapor intrusion at the Site.

In a letter dated May 9, 2013, the Ohio EPA expressed concerns about the risk to human health from indoor air exposure to VOCs from a shallow PCE and TCE groundwater plume. Ohio EPA viewed the Site as a potential threat to the residences and businesses located southwest of the source area. Ohio EPA requested assistance from the EPA Region 5 Emergency Response Branch in evaluating options for addressing current and potential vapor intrusion risks at the Valley Pike VOC Site.

On June 14, 2013, the Health Assessment Section of the ODH, under a Cooperative Agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), provided health-based guidance to evaluate the results of vapor intrusion sub-slab and indoor air sampling for contaminants of concern at the Site.

Sub-Slab Screening Levels (residential properties):
PCE = 60 ppbv
TCE = 4 ppbv

Indoor Air Screening Levels (residential properties):
PCE = 6 ppbv
TCE = 0.4 ppbv

1.1.2.1 Location

The Valley Pike VOC Site is located in the residential area west and southwest of the source area, located at 2949 Valley Pike, in Riverside, Montgomery County, Ohio. The Site's geographic coordinates are 39° 47' 51.2376" North latitude and 84° 7' 55.5522" West longitude. The Site includes a PCE and TCE-contaminated groundwater plume flowing south and southwest of the source area into the adjacent residential area.

1.1.2.2 Description of Threat

The residential neighborhood located west and southwest of the source area is being affected by PCE and/or TCE vapor intrusion. Vapor Intrusion is the subsurface migration of PCE and TCE vapors into the indoor air of residential properties at the Site. A completed exposure pathway for PCE and TCE vapor intrusion has been documented at numerous residential properties.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

In July and August 2013, EPA conducted a removal site assessment at the Site. The purpose of the site assessment was to determine if vapor intrusion was occurring in the residential neighborhood west and southwest of the source area and to evaluate the Site for a potential time-critical removal action. During the site assessment, EPA conducted the following activities:

- Reviewed historical Ohio EPA groundwater and soil gas sampling results.
- Oversaw the Ohio EPA Site Investigation Field Unit use a Geoprobe unit to collect eight groundwater samples and install 16 nested soil gas probes at 9 locations.
- Analyzed four groundwater samples collected by Ohio EPA personnel
- Collected nine soil gas samples from the Ohio EPA installed soil gas probes
- Collected five sub-slab samples from residential properties and one sub-slab sample from a nonresidential property.
- Collected seven indoor air samples from residential properties and one indoor air sample from a nonresidential property.

Based on 2013 EPA data, the ODH concluded that a completed exposure pathway exists for vapor intrusion at the Site.

Based on the analytical results and Site conditions observed during the site assessment, the Site meets the criteria for a removal action pursuant to 40 CFR 300.415(b)(2) and poses an imminent and substantial threat to the public health or welfare of the United States or the environment.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

EPA sampling results from 2013 have documented that vapor intrusion is occurring in the Riverside residential neighborhood located west and southwest of the source area.

As of July 2013, the sub-slab samples from four residential properties have PCE concentrations ranging from 930 to 8,200 ppbv, which exceeds the ODH residential sub -slab screening level of 60 ppbv. The indoor air samples from two residential properties have PCE concentrations ranging from 6.9 to 32 ppbv, which exceeds the ODH residential indoor air screening level of 6 ppbv. These results document a completed exposure pathway for PCE vapor intrusion.

The sub-slab samples from three residential properties have TCE concentrations ranging from 60 to 160 ppbv, which exceeds the ODH residential sub-slab screening level of 4 ppbv. The indoor air samples from three residential properties have TCE concentrations ranging from 0.44 to 0.92 ppbv, which exceeds the ODH residential indoor air screening level of 0.4 ppbv. These results document a completed exposure pathway for TCE vapor intrusion.

ODH Health Consultation - September 2013

On September 4, 2013, ODH, under a Cooperative Agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), submitted a Letter Health Consultation to EPA. The Health Consultation assessed the data that EPA collected

and discussed the public health implications of exposure to VOCs from vapor intrusion from the Site. The Health Consultation provided the following conclusions and recommendations:

Health Consultation Conclusions

1. A completed exposure pathway exists for vapor intrusion, as PCE has been detected as high as 20,000 ppb in the groundwater, 30,000 ppb in the soil gas, 8,200 ppb in the sub-slab soil gas, and 31 ppb in the indoor air at one residence. TCE has been detected as high as 47 ppb in the groundwater, 5,600 ppb in the soil gas, 160 ppb in the sub-slab soil gas, and 0.87 ppb in the indoor air at the same residential property.

2. VOCs in the sub-slab soil gas samples at the four residences sampled (two located on Rondowa Avenue, one on Hypathia Avenue, and one on Bushnell Avenue) located in the neighborhood southwest of the MRP facility were detected at levels that could affect indoor air quality. PCE levels in the sub-slab samples exceeded both screening and action levels.

3. Concentrations of PCE and TCE in the indoor air of one residence tested in July 2013 exceeded screening levels.

4. More data is needed to conclude whether the vapor intrusion pathway could affect indoor air quality at other residential properties and harm people's health. At this time, only a few indoor air samples have been collected by EPA. Additionally, previous experience with vapor intrusion sites in the same general part of north Dayton have indicated potential for significant seasonal variation in soil gas levels under impacted homes.

Health Consultation Recommendations

1. Testing the indoor air of the other homes with high sub-slab results should be a priority. Other residences and businesses at risk of exposure via vapor intrusion pathway should have their sub-slab and indoor air sampled for PCE, TCE, and degradation products cis-1,2-DCE and vinyl chloride. Concurrent outdoor (ambient) air samples should also be collected. Sample collection during multiple seasons, including at least one sample in the winter, is recommended to characterize seasonal variability.

2. The home on Bushnell Avenue should be considered for mitigation to reduce or eliminate ongoing exposures to PCE and TCE in the indoor air. Occupied residences with sub-slab soil gas concentrations exceeding action levels should also be considered for mitigation.

3. The full extent of the VOC contamination, both in groundwater and soil gas, associated with the Valley Pike VOC site should be determined.

2.1.2 Response Actions to Date

On December 9, 2013, the EPA Removal Action was initiated. An EPA Project Office was established at 2049 Harshman Road, Dayton, Ohio 45424. Between December 2013 and May 15, 2014, START conducted residential baseline sub-slab/indoor air

sampling and ERRS initiated residential vapor abatement system (VAS) installations. EPA, local health department, and the City of Riverside representatives requested residents in the area of investigation to sign access agreements for EPA vapor intrusion sampling.

See POLREP 1 for actions between December 9, 2013 and January 17, 2014.
See POLREP 2 for actions between January 18 and March 14, 2014.
See POLREP 3 for actions between March 15 and May 15, 2014.

Week of May 19, 2014
EPA collected 12 residential vapor intrusion samples. The samples collected were either baseline samples or proficiency samples collected 30 days after VAS installation.

The sub-slab, crawl space, and indoor air samples are being collected using pre-cleaned, laboratory-supplied, 6-liter SUMMA canisters. The SUMMA canisters are being fitted with flow regulators to allow sample collection over a 24-hour period. The samples are being analyzed for VOCs using EPA Method TO-15.

EPA contractors installed VAS at two residential properties.

Week of May 26, 2014
EPA collected 13 residential vapor intrusion samples. The samples collected were either baseline samples or proficiency samples collected 30 days after the installation of VAS.

EPA installed VAS at two residential properties.

Week of June 2, 2014
The site was shut down this week.
No residential vapor intrusion sampling was conducted this week, and no VASs were installed this week.

Week of June 9, 2014
EPA collected 9 residential vapor intrusion samples. The samples collected were either baseline samples or proficiency samples collected 30 days after the installation of VASs.

EPA installed VAS at three residential properties.

Week of June 16, 2014
EPA collected 13 residential vapor intrusion samples. The samples collected were either baseline samples, proficiency samples collected 30 days after the installation of VASs, or a resample collected from properties where baseline samples were previously collected during the winter.

On June 19, 2014, EPA OSC Renninger and local health department representative Tom Hut briefed City of Riverside Council on the status of the removal action. EPA informed Council of an expanded area of investigation between Hypathia Ave and Prince Albert Blvd based on recent groundwater sample results.

EPA installed VAS at two residential properties.

Week of June 23, 2014
EPA collected 8 residential vapor intrusion samples. The samples collected were either baseline samples, proficiency samples collected 30 days after the installation of VASs, or resamples collected from properties where baseline samples were previously collected during the winter.

EPA installed VAS at two residential properties.

Week of June 30, 2014
The site was shut down this week.
No residential vapor intrusion sampling was conducted this week, and no VAS were installed this week.

Week of July 7, 2014
EPA collected 14 residential vapor intrusion samples. The samples collected were either baseline samples, proficiency samples collected 30 days after the installation of VASs, or resamples collected from properties where baseline samples were previously collected during the winter.

EPA installed VAS at four residential properties.

Week of July 14, 2014
EPA collected 9 residential vapor intrusion samples. The samples collected were either baseline samples, proficiency samples collected 30 days after the installation of VASs, or resamples collected from properties where baseline samples were previously collected during the winter.

EPA installed VASs at two residential properties.

On July 16, 2014, EPA and ATSDR conducted a public meeting at Stebbins High School. The public meeting was attended by approximately 75 residents. Local and state government officials were also in attendance. EPA and ATSDR explained the sampling results from the summer of 2013 through July 2014 and highlighted the following:

- There is a PCE and TCE groundwater plume beneath the residential neighborhood west and southwest of the source area;
- Elevated concentrations of PCE and TCE were observed in the groundwater, soil gas, sub-slab and indoor air in the neighborhood;
- The area of investigation for the Valley Pike VOC Site expanded based on groundwater sampling data from March 2014. The area of investigation currently includes the area between Hypathia Ave, Valley Pike, Forest Home Ave, and Prince Albert Blvd;
- PCE and TCE concentrations in residential sub-slab and indoor air samples were observed to be significantly higher than sample data collected prior to December 2013;
- EPA requested residential property owners interested in having their properties assessed and sampled for vapor intrusion to sign an access agreement;
- If residential properties in the area of investigation show vapor intrusion sampling

results greater than the screening levels established by ATSDR/ODH, EPA will offer to install a residential vapor abatement system and conduct 30 day proficency sampling;
-ATSDR reviewed PCE and TCE health issues;
- EPA established a local project office in the neighborhood, located at 2049 Harshman Road.

Following the public meeting, EPA and EPA START scheduled approximately 15 additional residential properties to be sampled for vapor intrusion.

As of July 18, 2014, the following removal activities have been completed:
- 366 total residential properties with area of investigation (determined by groundwater investigation)
- 213 properties sampled
- 123 properties are eligible for sampling but have yet signed an access agreement
- 74 properties have results greater than ATSDR/ODH screening levels and are eligible for a VAS
- 50 properties currently have an installed VAS
- 47 properties have results less than ATSDR/ODH screening levels and laboratory detection limits
- 83 properties have PCE/TCE detections, but results less than ATSDR/ODH screening levels and are eligible for seasonal resampling
- 13 properties have denied EPA access to conduct vapor intrusion sampling
- 23 properties are vacant and abandoned

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

EPA is investigating PRPs at the Site.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
N/A					

2.2 Planning Section

2.2.1 Anticipated Activities

See below in Section 2.2.1.1.

2.2.1.1 Planned Response Activities

1. Continue to implement a Site Health and Safety Plan;

2. Conduct vapor intrusion sampling (for VOCs) and extent of contamination sampling utilizing groundwater, soil gas, sub-slab, and indoor air sampling techniques. The area

of investigation includes the source area on the east, Prince Albert Blvd on the west (approximately 1,500 feet southwest of the source area),

3. If the ATSDR/ODH Sub-Slab or Indoor Air Screening Level for a contaminant of concern (e.g., PCE or TCE) is exceeded for a residential structure, design and install a vapor abatement mitigation system in the structure impacted by subsurface gas migration. The abatement system will include installation of a VAS, sealing cracks in walls and floors of the basement, and sealing drains that could be a pathway. The vapor abatement mitigation system will be designed to control levels of VOCs to below ATSDR/ODH sub-slab and indoor air screening levels; and

4. Develop and implement a performance sample plan to confirm that ATSDR/ODH screening levels are achieved for contaminants of concern (PCE, TCE, etc) following installation of a VAS.

2.2.1.2 Next Steps

1. Continue reaching out to residents in the neighborhood to obtain access agreements to conduct vapor intrusion sampling.

2. Continue vapor intrusion sampling in the residential neighborhood.

3. Generate sample result letters and schedule meetings with residents to discuss sampling results.

4. Schedule VAS design walk-through times and installation dates, as necessary.

5. For residential properties where a VAS was installed, conduct 30-day post installation proficiency air sampling.

2.2.2 Issues

To schedule vapor intrusion sampling, please visit or the call EPA project office located at:

EPA Project Office
2049 Harshman Road
Riverside, OH 45424
937.237.7530

The EPA Project Office will be closed from July 25-August 1.

2.3 Logistics Section

None.

2.4 Finance Section

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$1,000,000.00	$359,567.00	$640,433.00	64.04%
START - Weston	$50,000.00	$44,300.00	$5,700.00	11.40%
START - Tetra Tech	$60,000.00	$24,071.00	$35,929.00	59.88%
Intramural Costs				
USEPA - Direct	$75,000.00	$51,000.00	$24,000.00	32.00%
Total Site Costs	$1,185,000.00	$478,938.00	$706,062.00	59.58%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer

A safety plan has been completed, reviewed and signed by all personnel on site.

2.5.2 Liaison Officer

Periodic meetings conducted with OEPA, Public Health - Dayton & Montgomery County, and ODH to update agencies on sample results.

Monthly meetings conducted with Riverside council members and Assistant City Manager.

2.5.3 Information Officer

EPA's Office of Public Affairs (Ginny Narsette - Community Involvement Coordinator) has completed the following:
1. Set up the following website:

http://www.epa.gov/Region5/cleanup/valleypikevocsite/index.html

2. EPA's Office of Public Affairs went door-to-door during the week of March 17th and obtained 40+ signed access agreements.

3. Set up a repository containing site information. The repository is located at:

Dayton Metro Library
6160 Chambersburg Road
Huber Heights, OH 45424

6. EPA has set up a local project office to schedule sampling and to answer questions.

EPA Local Project Office
2049 Harshman Road (located next to Subway)
Riverside, OH 45424
937.237.7530

3. Participating Entities

3.1 Unified Command

N/A

3.2 Cooperating Agencies

Ohio EPA
Public Health - Dayton & Montgomery County
Ohio Department of Health
City of Riverside
ATSDR

4. Personnel On Site

EPA OSC - 1
START (Tetra Tech) - 1
ERRS - 2
At-Home Radon Contractor - VAS installer
Environmental Doctor Contractor - VAS installer

5. Definition of Terms

ATSDR - Agency for Toxic Substances and Disease Registry
IA - indoor Air
ODH - Ohio Department of Health
PCE - tetrachloroethylene
ppb - parts per billion
ppbv - parts per billion by volume
SS - sub-slab
TCE - trichloroethylene
VAS - Vapor Abatement System

6. Additional sources of information

6.1 Internet location of additional information/report

Additional site information can be found at the following EPA public website:

http://www.epa.gov/Region5/cleanup/valleypikevocsite/index.html

6.2 Reporting Schedule

POLREP #5 will be issued in September 2014.

7. Situational Reference Materials

None.


ALL
SEASON
SAE 10W-40
MOTOR OIL


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